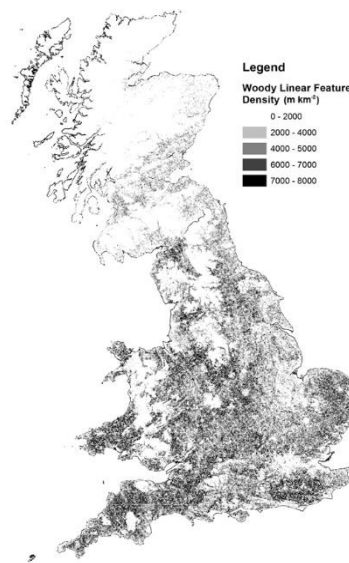


GB Woody Linear Features Framework v1.0



Summary

A modelled dataset derived from national datasets, describing the distribution of woody linear feature boundaries in Great Britain.

Background

Hedges and lines of trees (woody linear features) are important boundaries that connect and enclose habitats, buffer the effects of land management and enhance biodiversity in increasingly impoverished landscapes. Despite their acknowledged importance in the wider countryside they are usually not considered in models of landscape function due to their linear nature and the difficulties of acquiring relevant data about their character, extent and location.

Field mapping of hedgerows at a national scale would be both expensive and time consuming, therefore a predictive modelling approach has been taken which has produced a national coverage of woody linear features based upon existing national datasets.

Method

The dataset is the output from a model which classifies the attributes of each linear feature within a linear framework (based upon the simplified version of Ordnance Survey MasterMap used in Land Cover Map 2007 (LCM2007) (Morton et al., 2011)).

The following approach was taken:

- Areas of the framework were masked out where woody linear features were unlikely to be found or where it would be impossible to detect them, i.e. where land was higher than 350 m, urban, wooded or in a coastal tide-washed area. OS Land-Form PANORAMA and LCM2007 were used to do this.
- Boundary height information was calculated from a DTM (NEXTMap 5m). Boundaries with woody linear features were identified from this calculated height data using thresholds for different vegetation height attributes for a given length of boundary, namely: minimum vegetation height -0.13 m (accounting for the presence of a ditch adjacent to the woody feature) to maximum vegetation height 58 m (the maximum height for a tree in GB), and mean vegetation height 0.58 m (accounting for gappy features).
- The dataset presents linear features which have a high likelihood of being a woody linear feature.

Quality Control – model evaluation

The model has been evaluated by comparing the model results at different scales. The outputs of the model at a national scale are concordant with published statistics and spatially consistent with Countryside Survey (CS) results (Carey et al., 2008; Brown et al., 2014). For further information see Scholefield et al. (2016)

Dataset structure and description

The dataset presents linear features which have a high likelihood of being a woody linear feature.

Column name	Type	Description
SHAPE	<i>Geometry</i>	GEOMETRY OF FEATURE - POLYLINE
SHAPE_LENGTH	<i>Numeric</i>	LENGTH OF FEATURE, IN METRES

Dataset references

- **OS MASTERMAP, OS LAND-FORM PANORAMA**
Cartographic data (Public Sector Mapping Agreement datasets) reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright and database right 2016.
Ordnance Survey Licence number 100017572.
- **NEXTMAP – DIGITAL ELEVATION DATA** © INTERMAP TECHNOLOGIES INC. OR ITS SUPPLIERS 2003.
- BROWN, M.J., BUNCE, R.G.H., CAREY, P.D., CHANDLER, K., CROWE, A., MASKELL, L.C., NORTON, L.R., SCOTT, R.J., SCOTT, W.A., SMART, S.M., STUART, R.C., WOOD, C.M. & WRIGHT, S.M. (2014) **COUNTRYSIDE SURVEY 2007 MAPPED ESTIMATES OF LINEAR FEATURE LENGTHS IN GREAT BRITAIN**. NERC-ENVIRONMENTAL INFORMATION DATA CENTRE DOI:10.5285/FC65177D-B113-420E-A70B-05D3F42682D5

Relevant Publications & References

- CAREY, P.D. WALLIS, S. CHAMBERLAIN, P.M. COOPER, A. EMMETT, B.A. MASKELL, L.C. MCCANN, T. MURPHY, J. NORTON, L.R. REYNOLDS, B. SCOTT, W.A. SIMPSON, I.C. SMART, S.M. & ULLYETT, J.M. (2008) **COUNTRYSIDE SURVEY: UK RESULTS FROM 2007**. NERC/CENTRE FOR ECOLOGY & HYDROLOGY, 105PP. (CEH PROJECT NUMBER: C03259).
- MORTON, D., ROWLAND, C., WOOD, C., MEEK, L., MARSTON, C., SMITH, G., WADSWORTH, R., SIMPSON, I.C., (2011) **FINAL REPORT FOR LCM2007 - THE NEW UK LAND COVER MAP. COUNTRYSIDE SURVEY TECHNICAL REPORT NO. 11/07** NERC/CENTRE FOR ECOLOGY & HYDROLOGY 112PP. (CEH PROJECT NUMBER: C03259)
- **A MODEL OF THE EXTENT AND DISTRIBUTION OF WOODY LINEAR FEATURES IN RURAL GREAT BRITAIN**. SCHOLEFIELD, PAUL; MORTON, DAN; ROWLAND, CLARE; HENRYS, PETER; HOWARD, DAVID; NORTON, LISA, *ECOLOGY AND EVOLUTION*, SUBMITTED